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Office of Environment
and Energy
Washington, DC 20591

AEM
Area Equivalent Method
Version 3

User's Guide
September 1996

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Office of Environment and Energy
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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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The AEM is a screening tool for the INM and a quick way to assess the impact of changes in aircraft mix or number of operations as part of an EA., FONSI, or other environmental noise study. If there is a significant increase in contour area square miles (17%) then further analysis is necessary using the INM.

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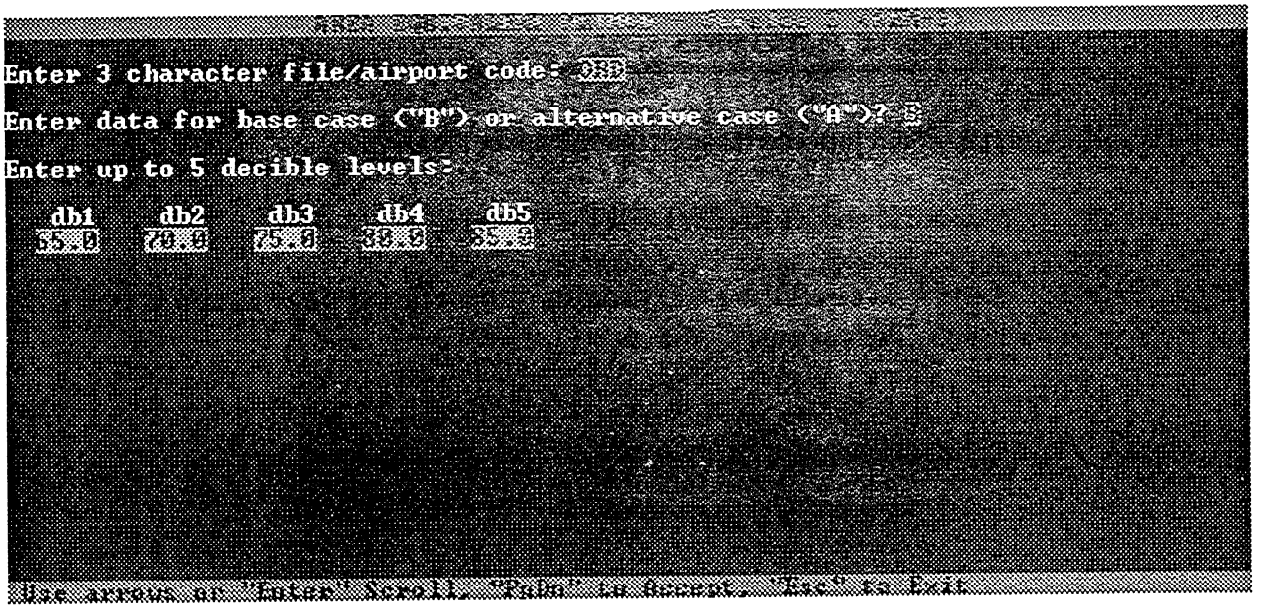


Figure 4.2 Screen 2

Step 4. The next screen (Figure 4.3) prompts for the designation of day and night LTO cycles for up to 107 specific aircraft types by the user. These numerical designations may be up to 9999 in each cell, and may be specified to two decimal places. Scrolling is accomplished with the up and down arrow keys (one aircraft at a time) or the page up and page down keys (10 aircraft at a time).

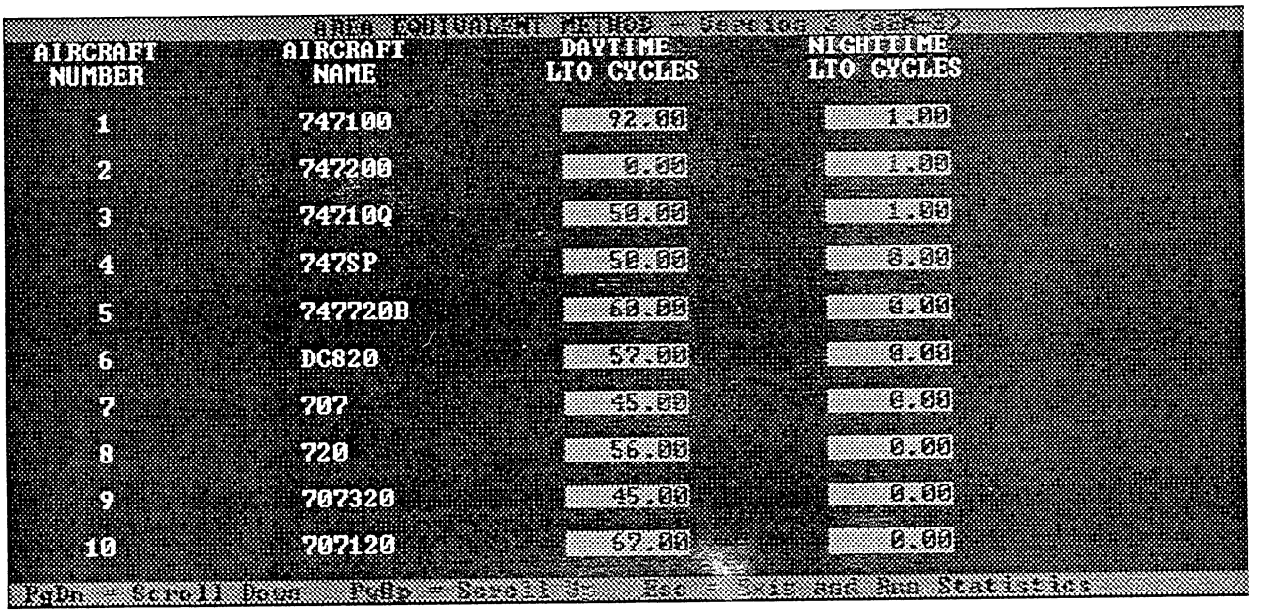
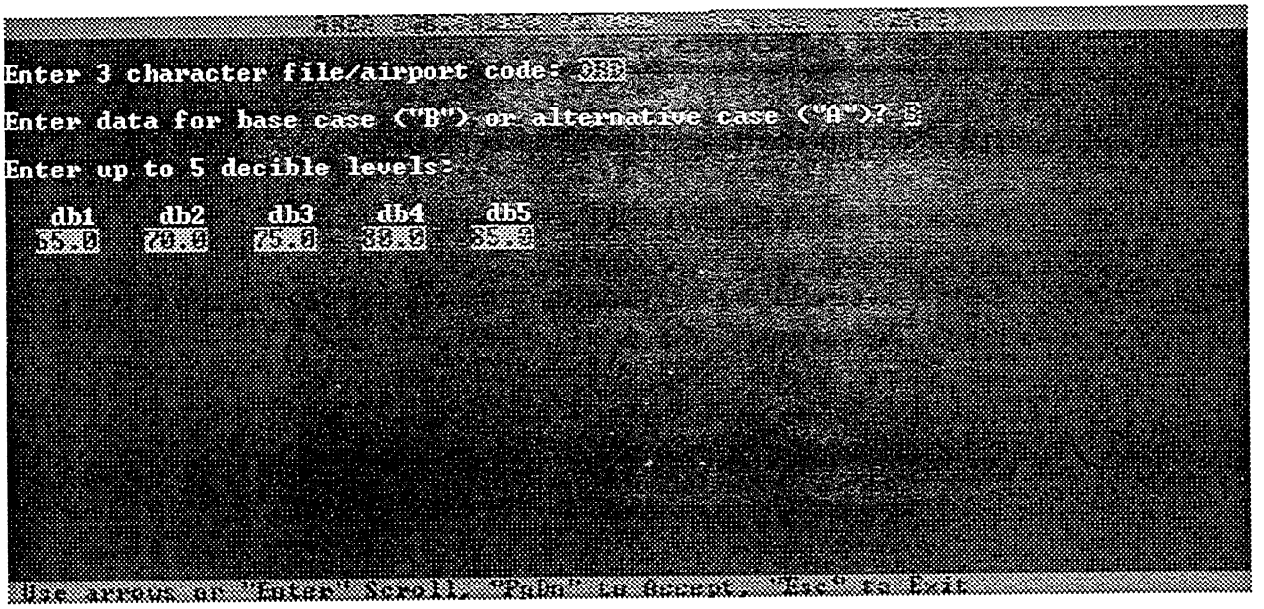


Figure 4.3 Screen 3

Step 5. Upon completion of the designation of the day and night LTO cycles, the ESC key will prompt a yes/no response to calculate noise impacts. The yes response (Y key) runs the program. During the run the user views the message PLEASE WAIT...CALCULATING.



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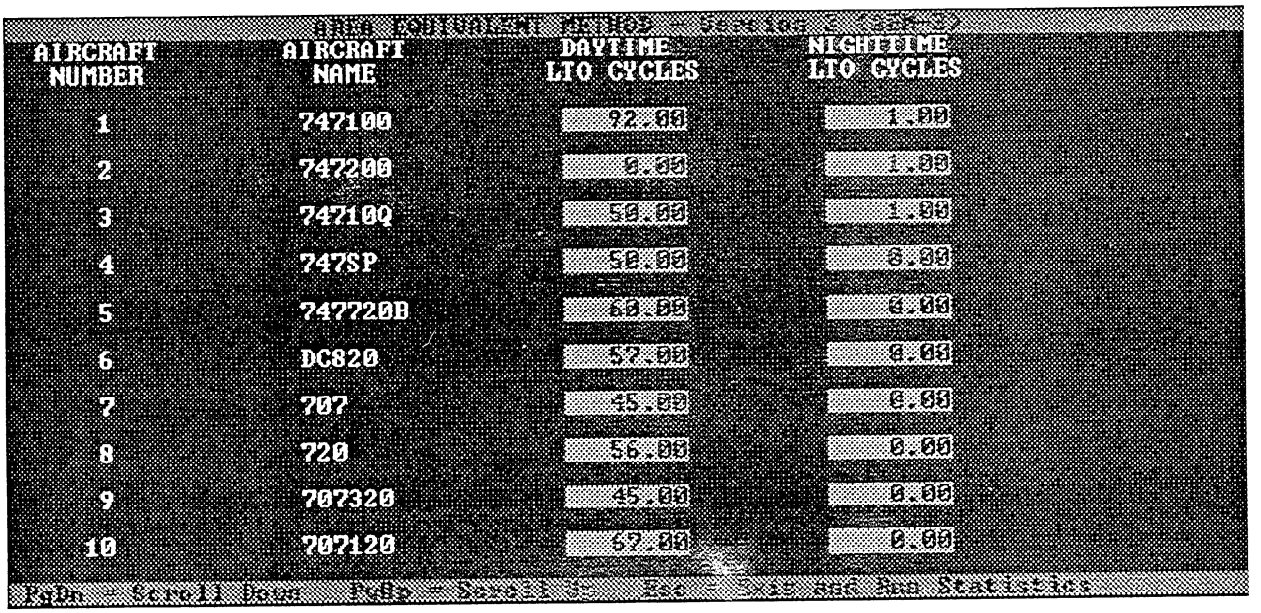

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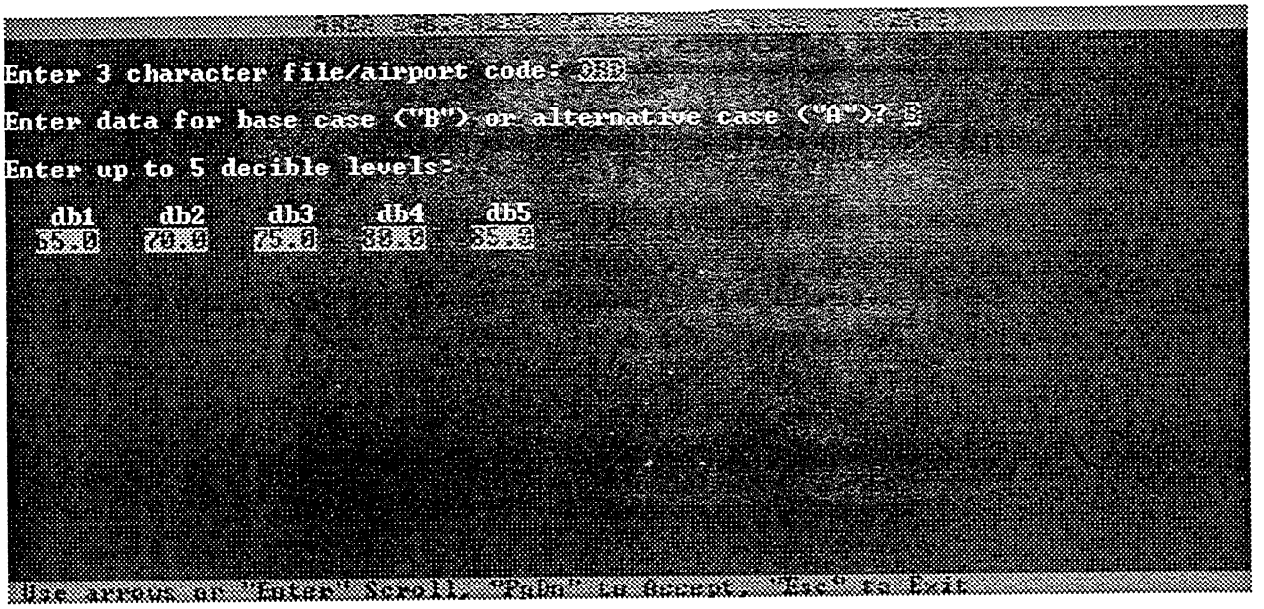

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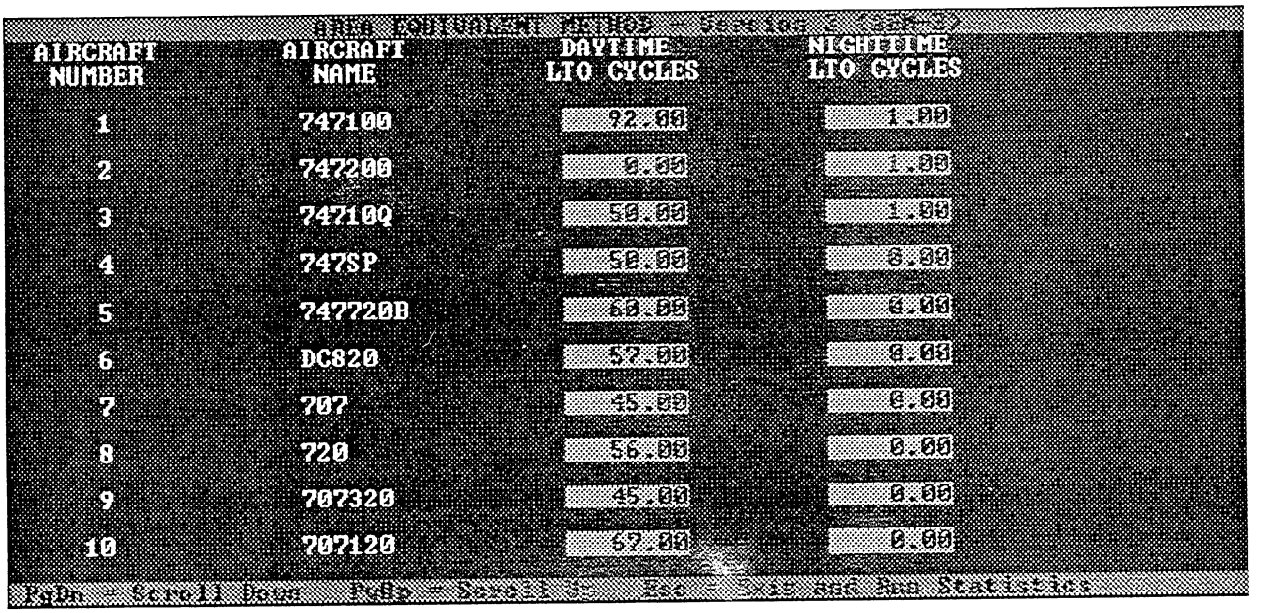

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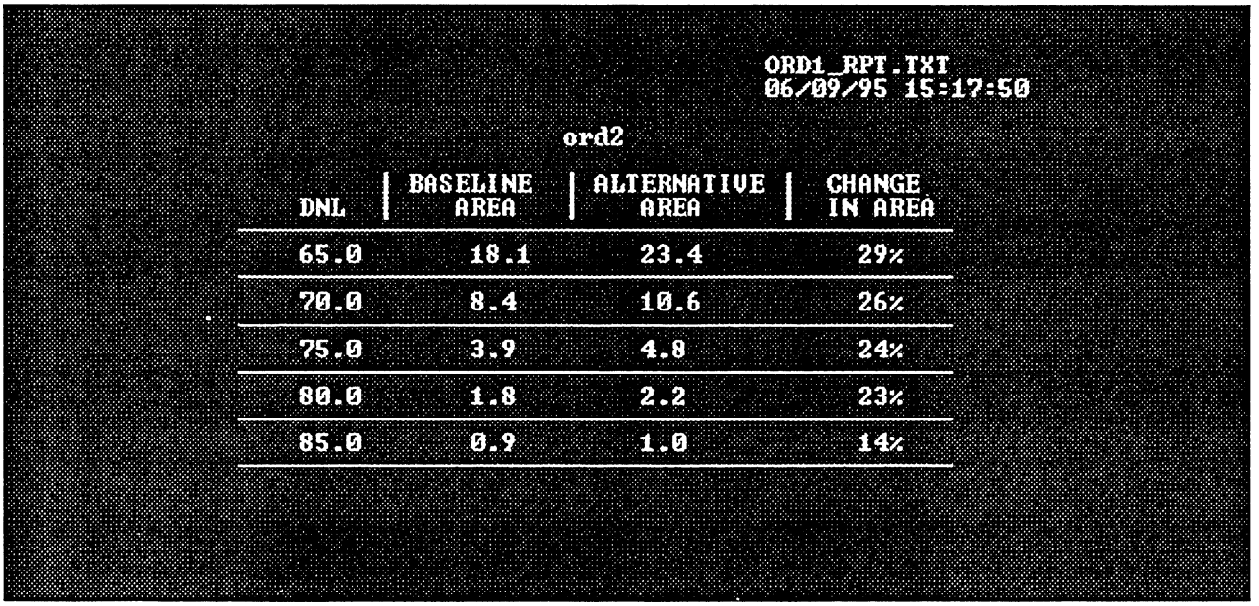
Step 11. For an alternative, the results table would present contour areas for both the base case and the alternative, and summarizes the percent changes (Figure 4.7).



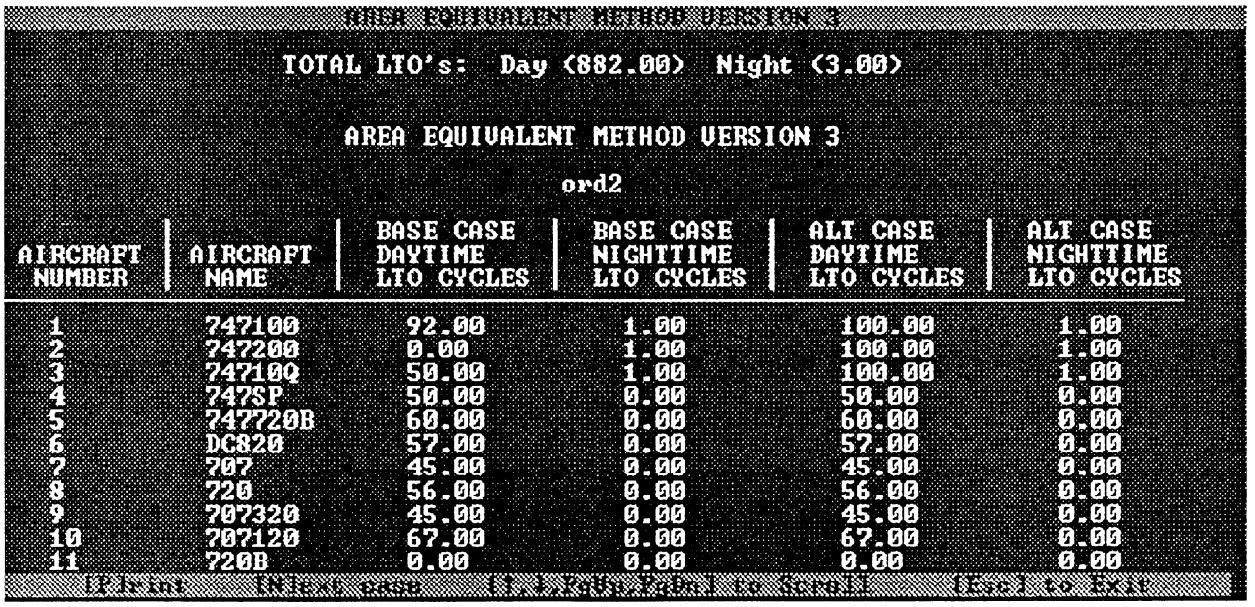
ORD1_RPT.TXT
06/09/95 15:17:50

ord2

DNL	BASELINE AREA	ALTERNATIVE AREA	CHANGE IN AREA
65.0	18.1	23.4	29%
70.0	8.4	10.6	26%
75.0	3.9	4.8	24%
80.0	1.8	2.2	23%
85.0	0.9	1.0	14%

Figure 4.7 Screen 7

Step 12. The **PgDn** key will scroll down to the list of day and night LTO cycles specified for the base and alternative cases (Figure 4.8). Follow Step 9 to continue or to exit the program.



AREA EQUIVALENT METHOD VERSION 3

TOTAL LTO's: Day (882.00) Night (3.00)

AREA EQUIVALENT METHOD VERSION 3

ord2

AIRCRAFT NUMBER	AIRCRAFT NAME	BASE CASE DAYTIME LTO CYCLES	BASE CASE NIGHTTIME LTO CYCLES	ALT CASE DAYTIME LTO CYCLES	ALT CASE NIGHTTIME LTO CYCLES
1	747100	92.00	1.00	100.00	1.00
2	747200	0.00	1.00	100.00	1.00
3	74710Q	50.00	1.00	100.00	1.00
4	747SP	50.00	0.00	50.00	0.00
5	747720B	60.00	0.00	60.00	0.00
6	DC820	57.00	0.00	57.00	0.00
7	707	45.00	0.00	45.00	0.00
8	720	56.00	0.00	56.00	0.00
9	707320	45.00	0.00	45.00	0.00
10	707120	67.00	0.00	67.00	0.00
11	720B	0.00	0.00	0.00	0.00

Figure 4.8 Screen 8

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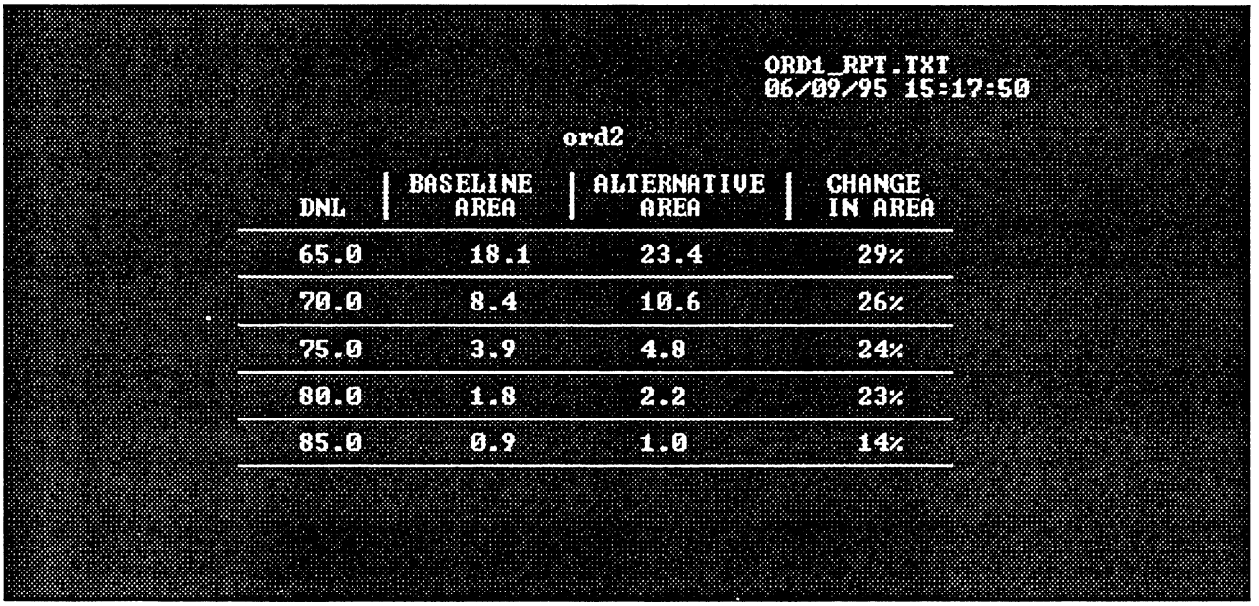

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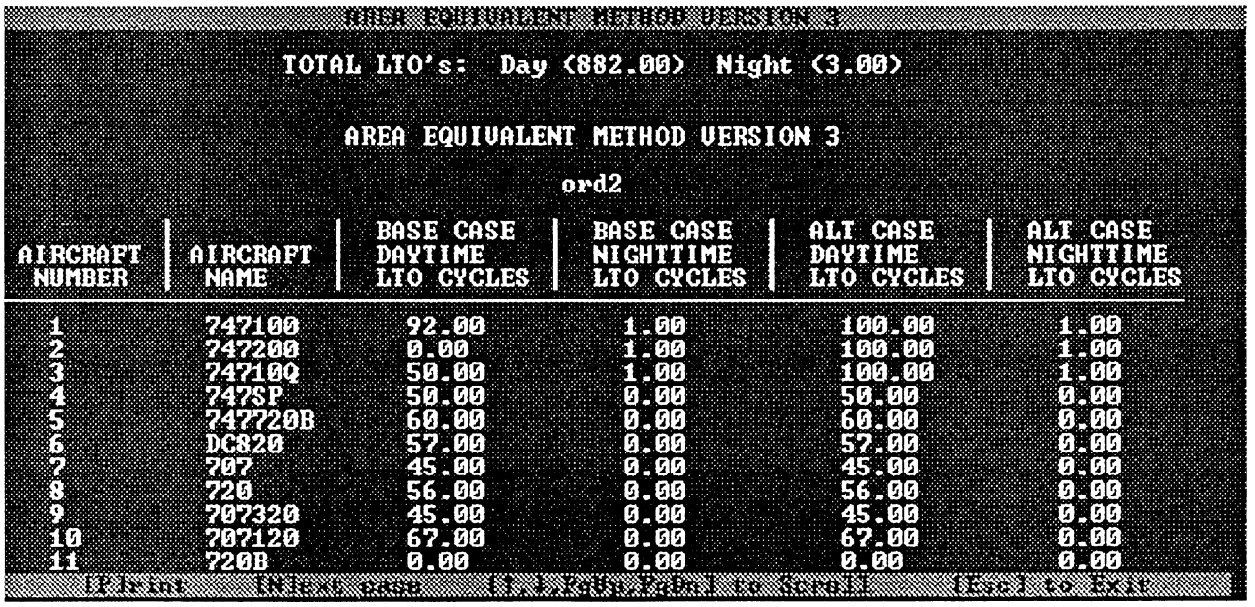

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5	747720B	60.00	0.00	60.00	0.00
6	DC820	57.00	0.00	57.00	0.00
7	707	45.00	0.00	45.00	0.00
8	720	56.00	0.00	56.00	0.00
9	707320	45.00	0.00	45.00	0.00
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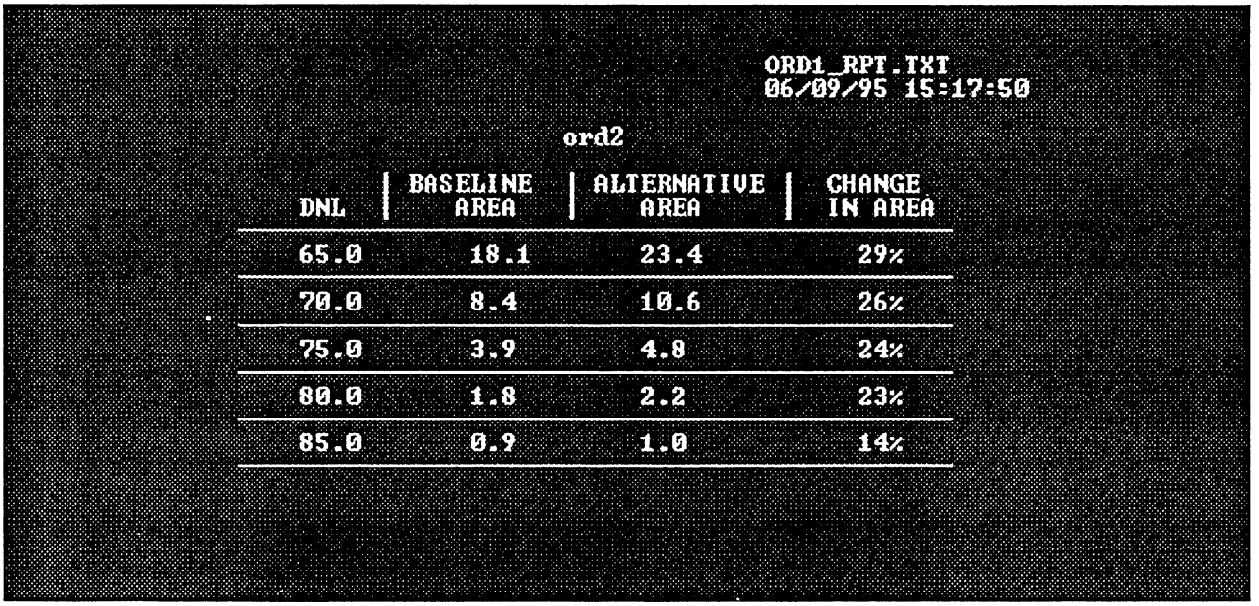

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ord2

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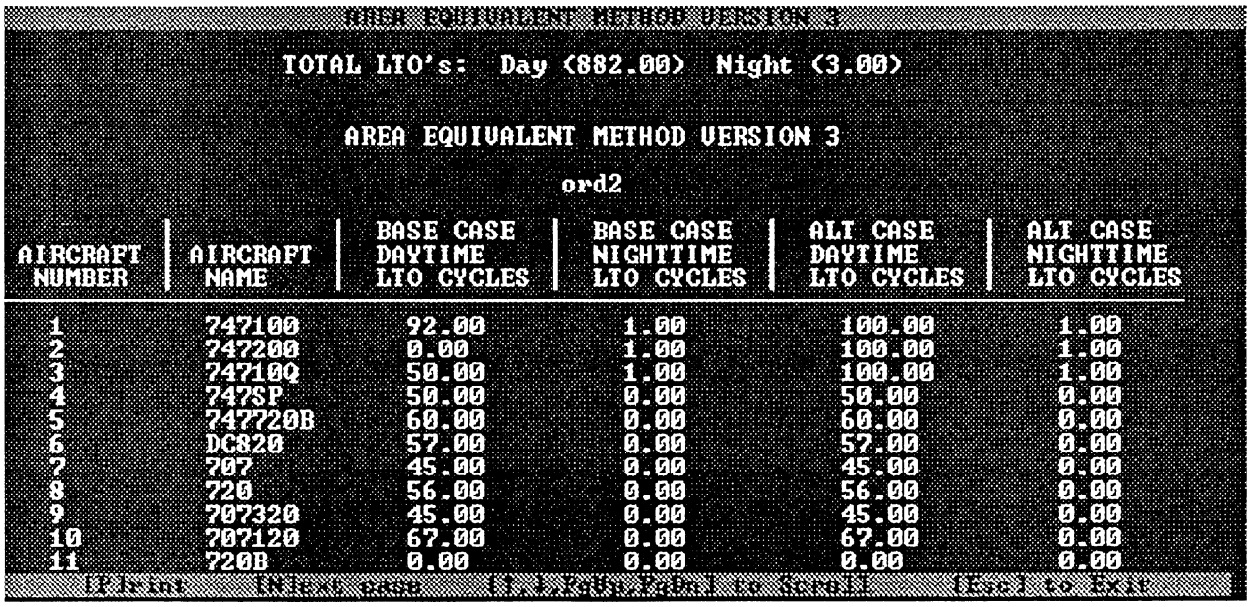

AREA EQUIVALENT METHOD VERSION 3

TOTAL LTO's: Day (882.00) Night (3.00)

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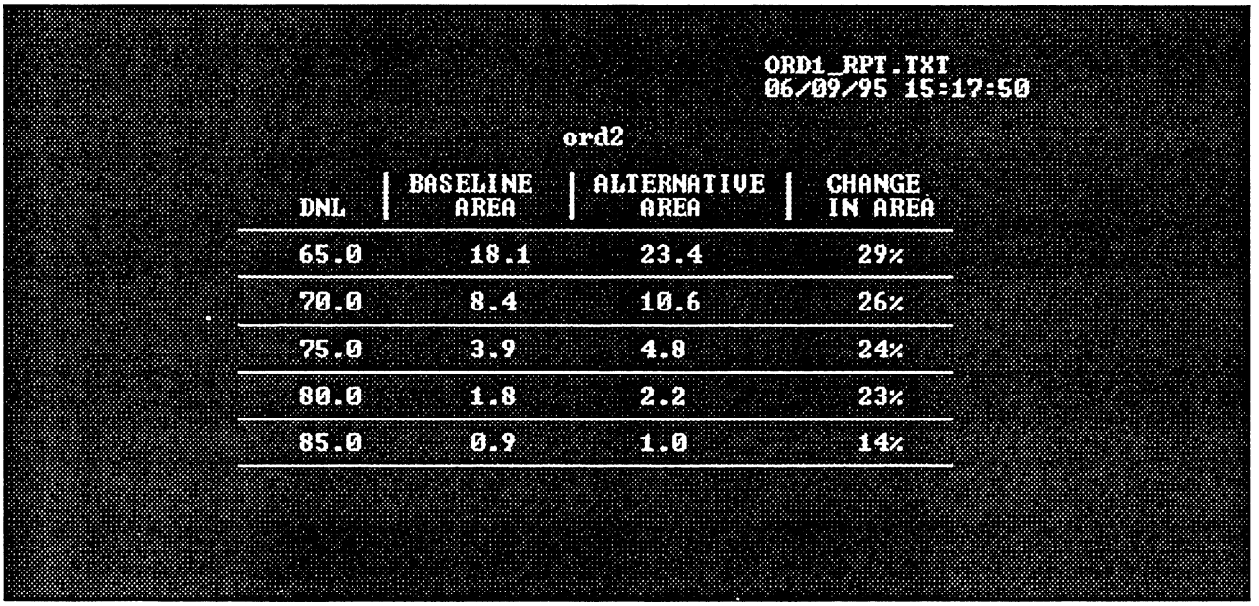

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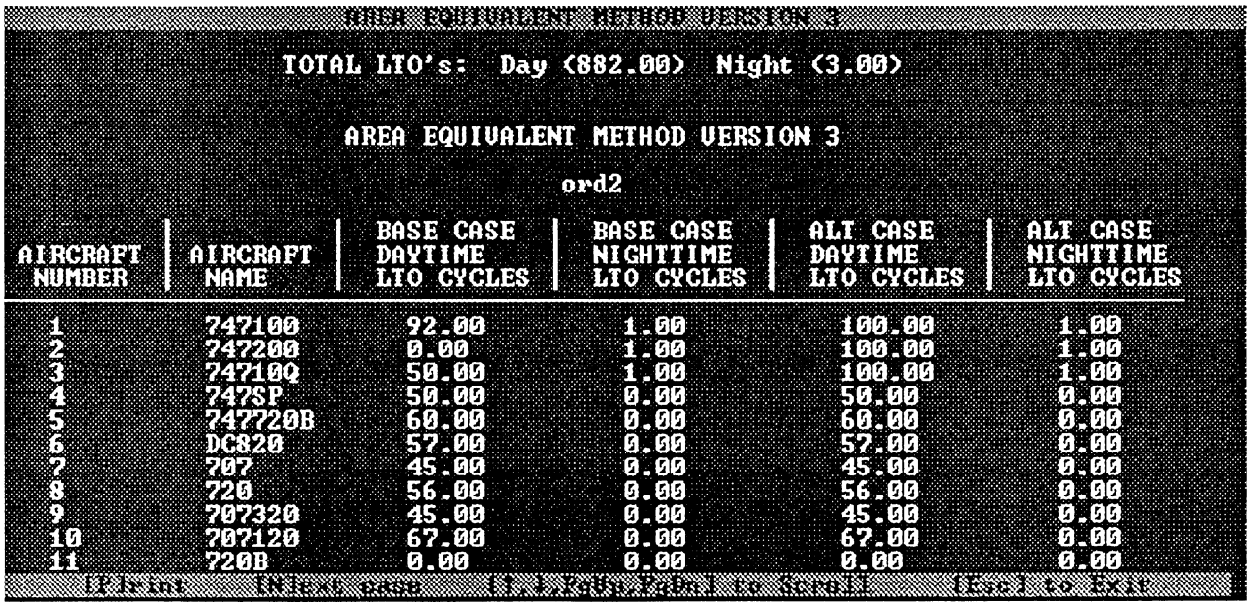

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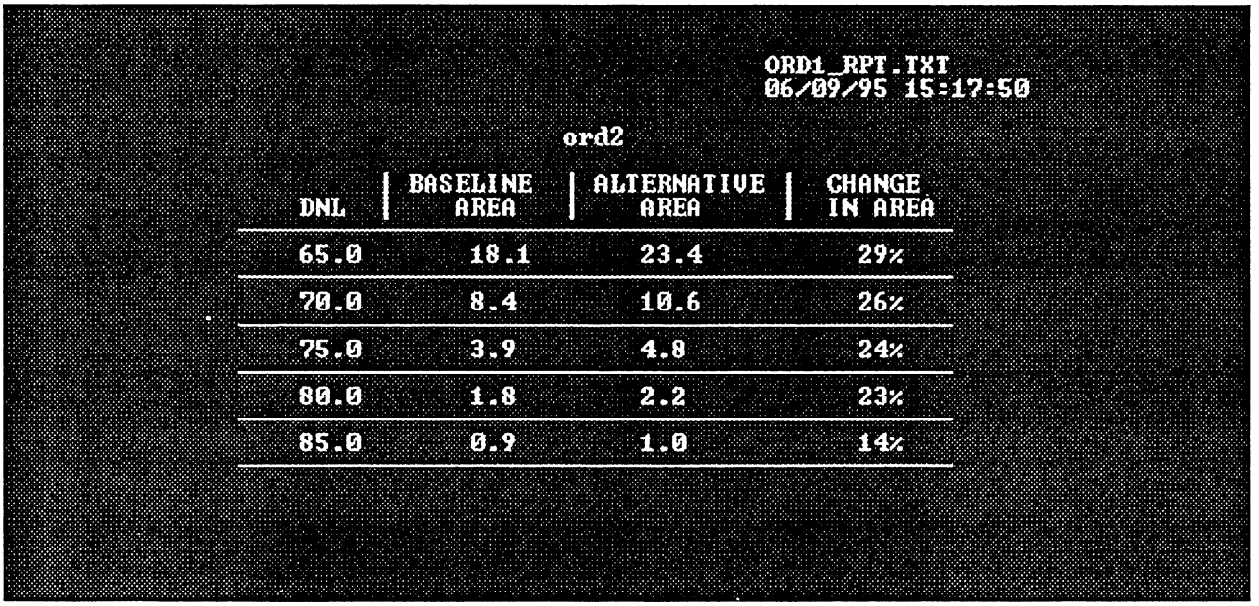

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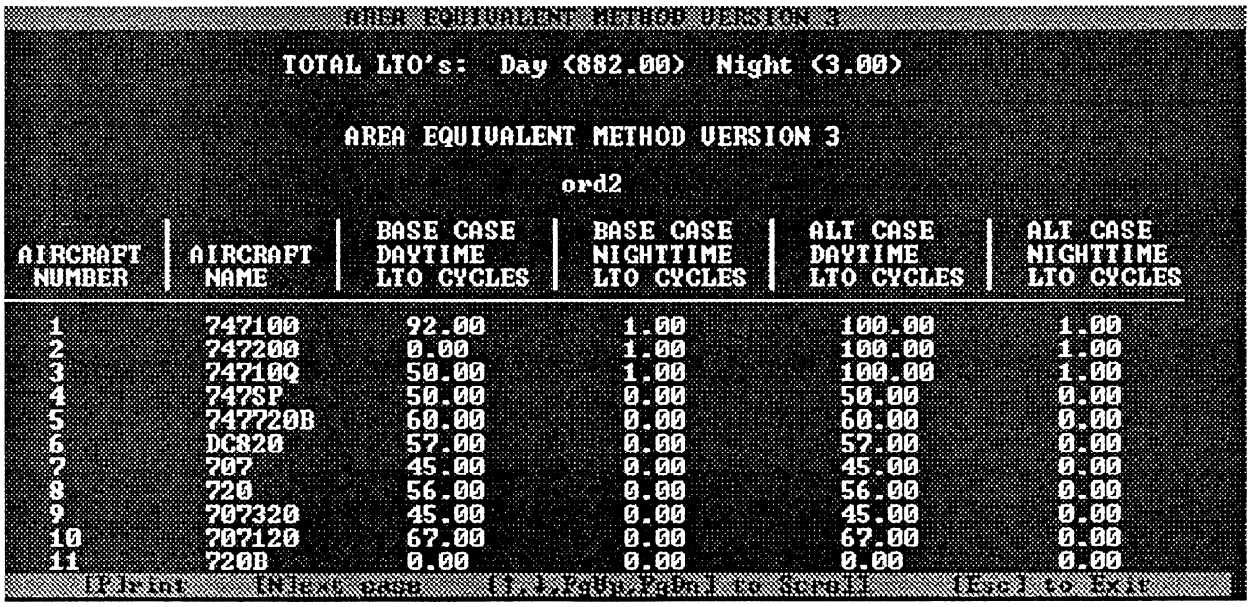

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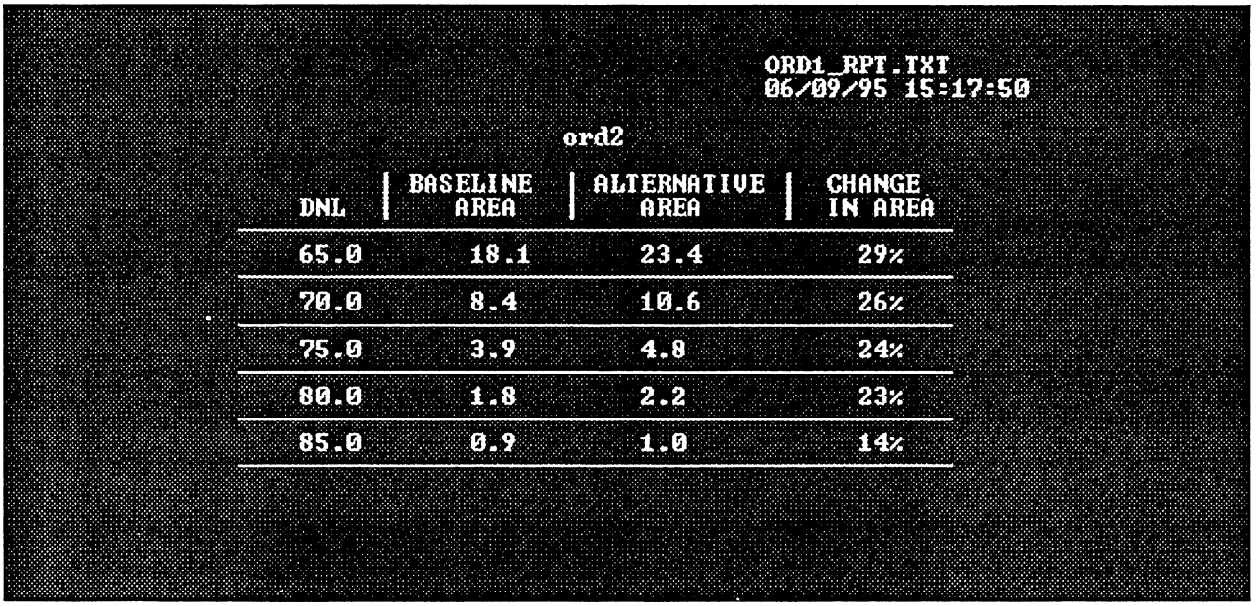

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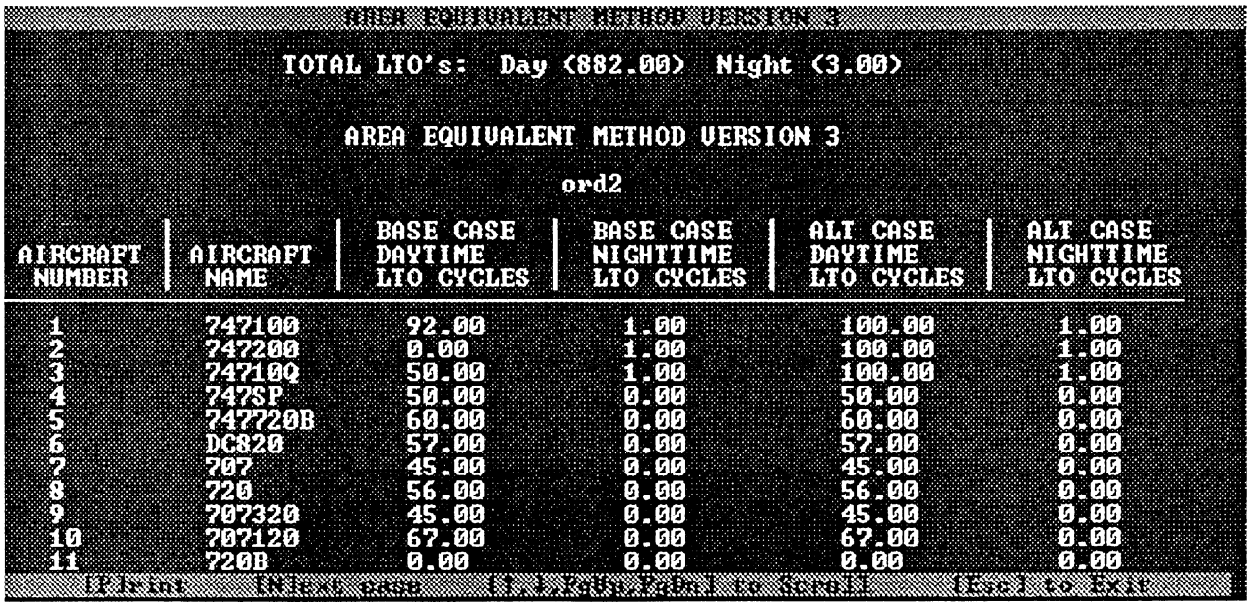

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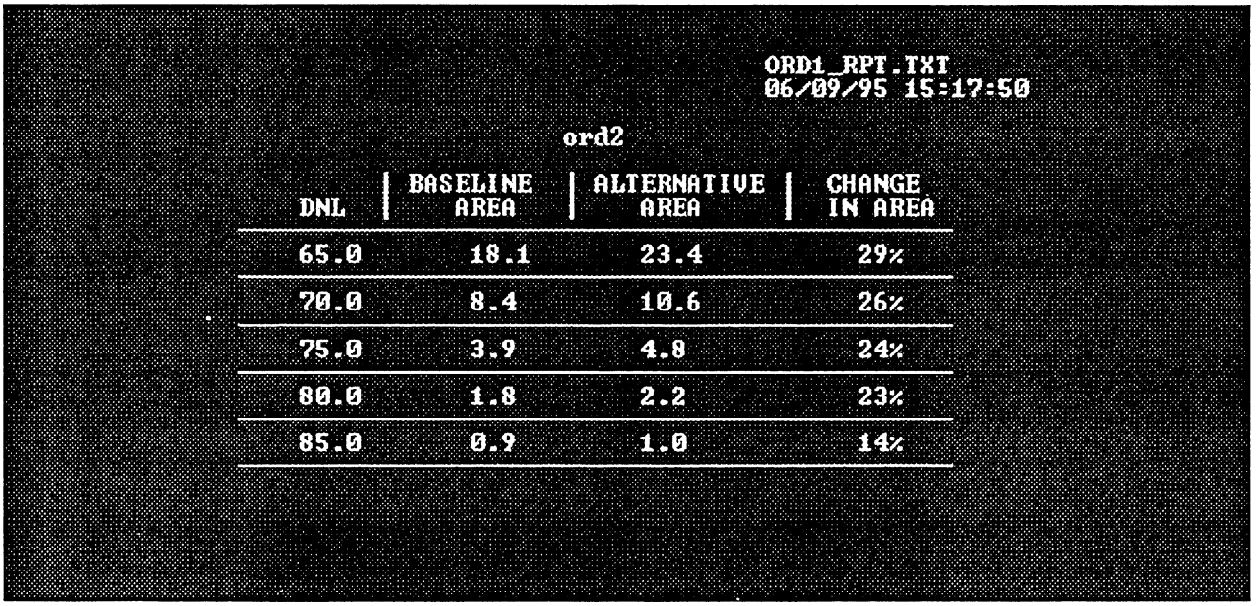

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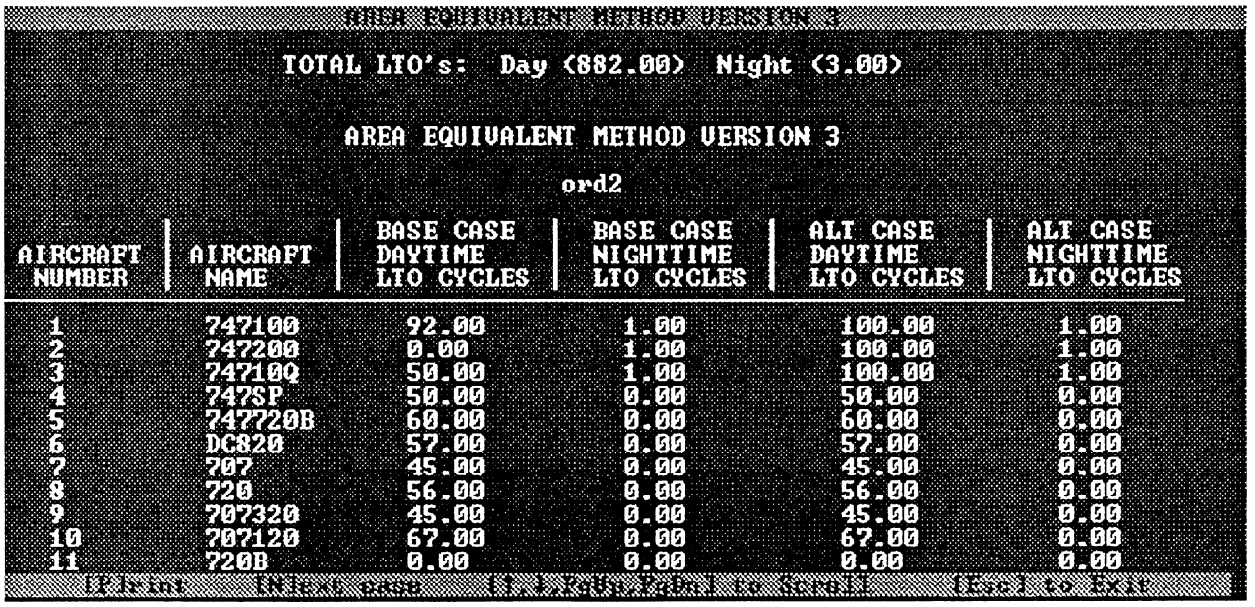

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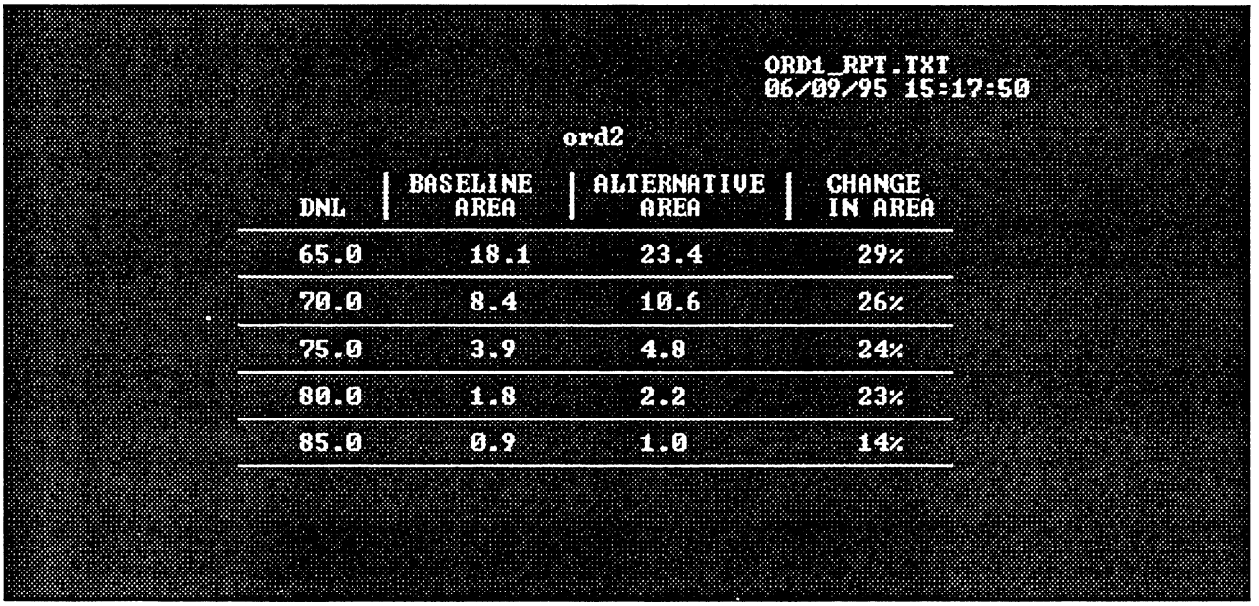

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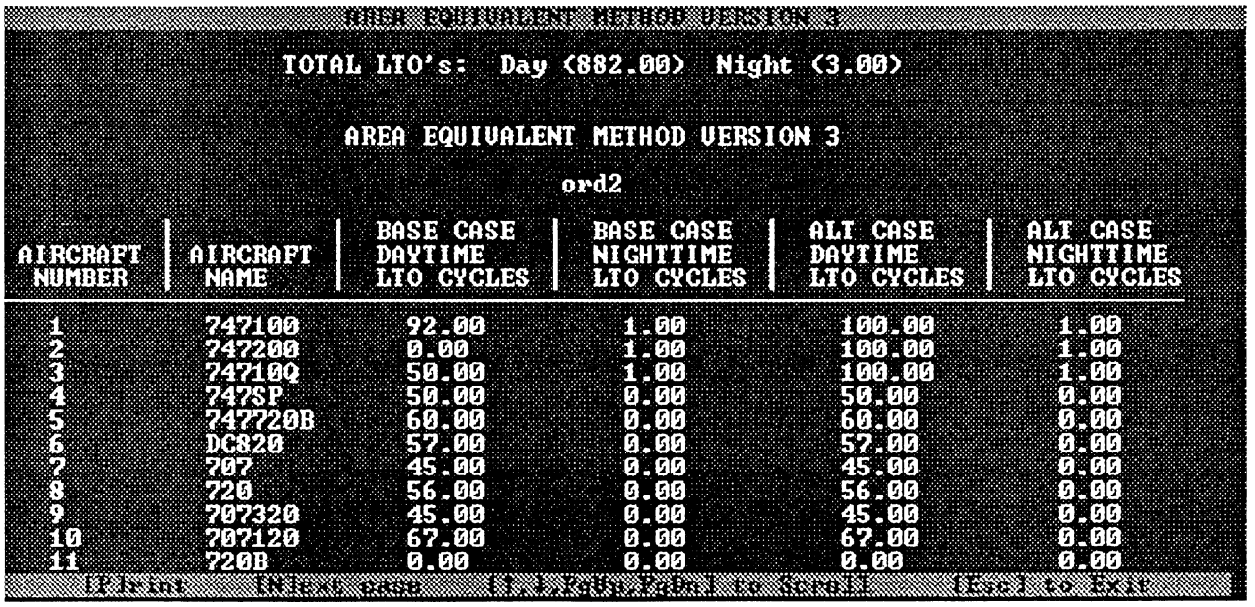

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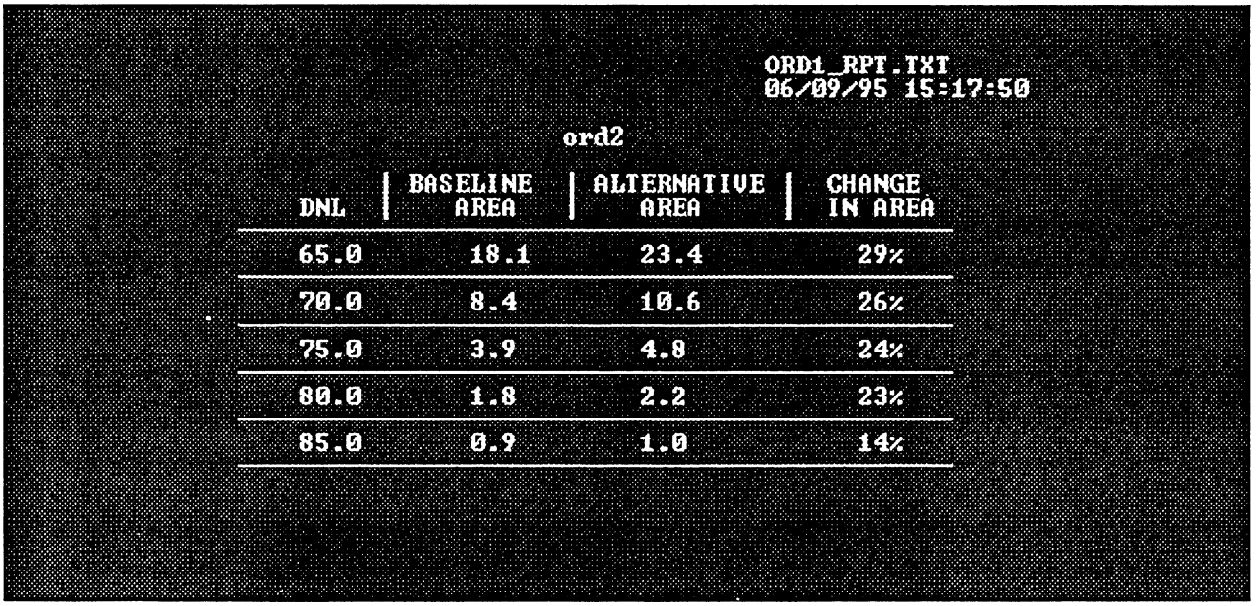

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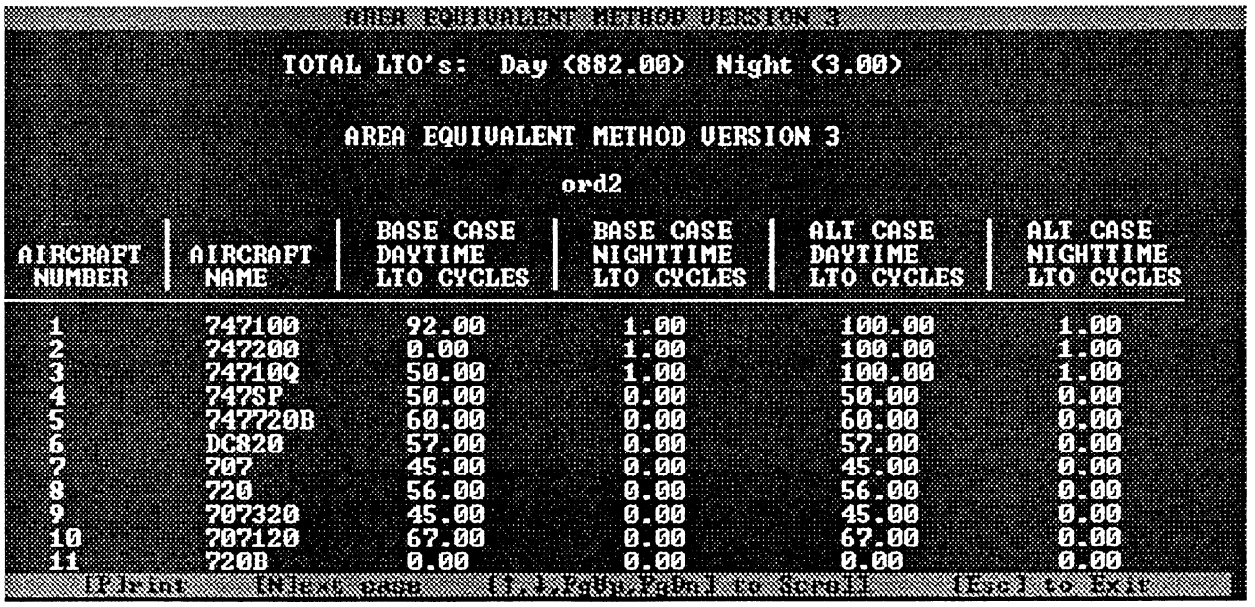

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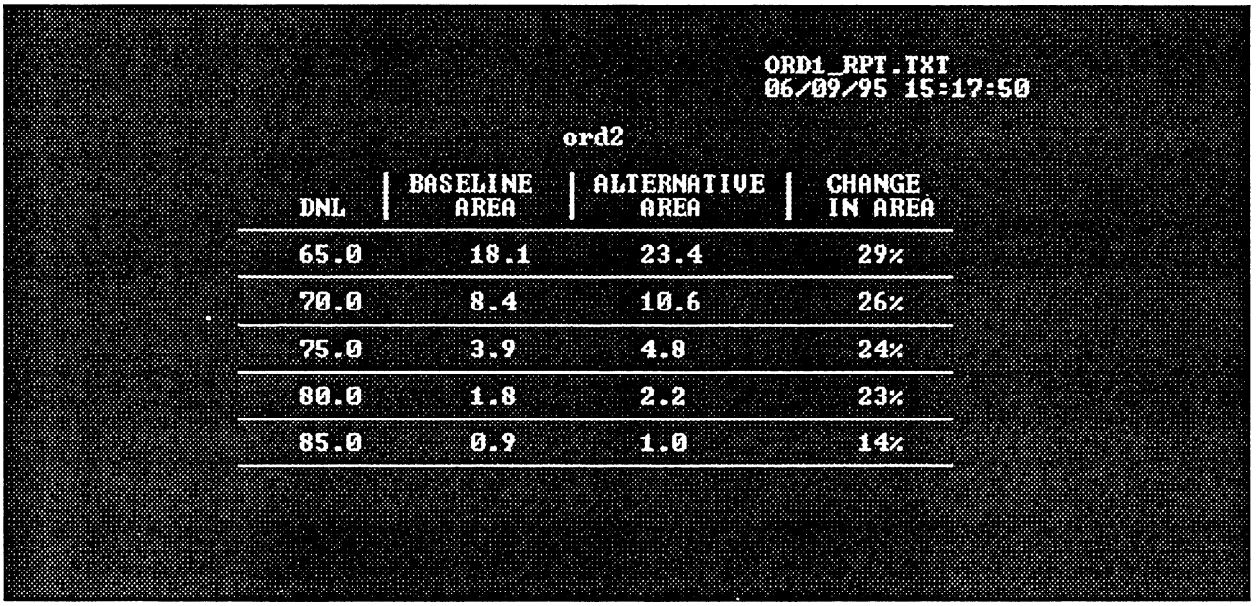

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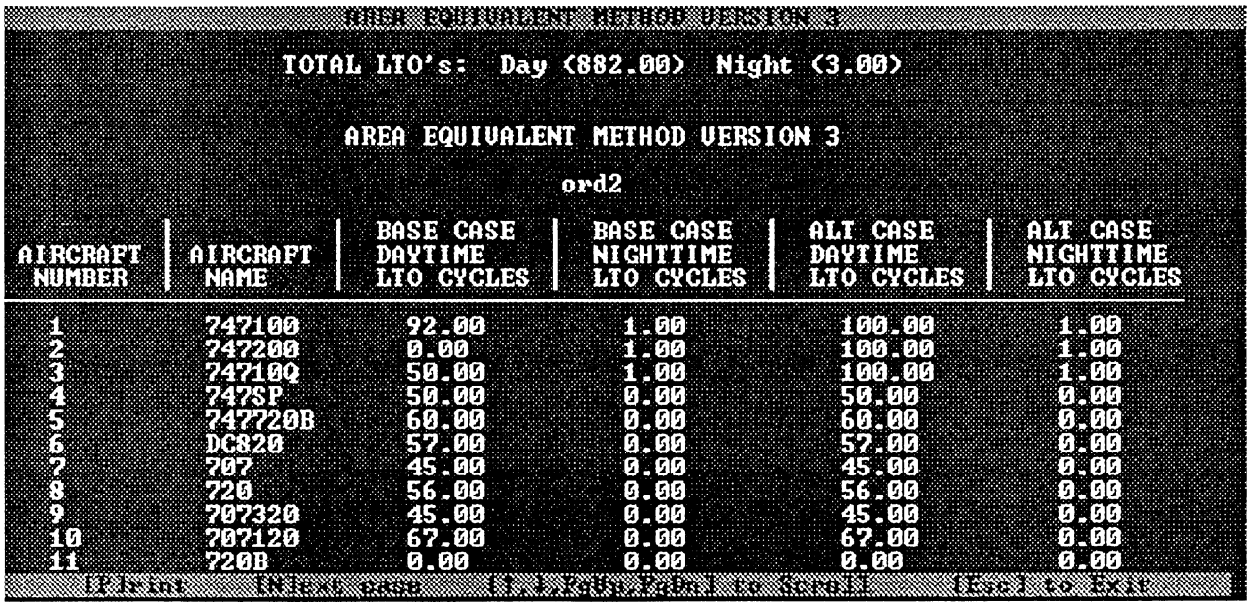

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